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August 3, 2006

Carol Ann Wehle
Executive Director
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Re: Proposed rule on the MFL Criteria for Lower East Coast Regional Planning Area for the Northeast Subregion of Florida Bay

Dear Ms. Wehle:

Audubon of Florida supports the South Florida Water Management District (District)'s efforts to restore Florida Bay, including the Comprehensive Everglades Restoration Plan (CERP) and the establishment of water reservations for the environment. We remain dedicated to working with the District to ensure water needed for true restoration will be available for the natural system. As the District has identified Minimum Flows and Levels (MFLs) as a process to establishing prevention and recovery strategies for the natural system, we submit our comments on the proposed rule for the MFL Criteria for Northeast Subregion of Florida Bay in the Lower East Coast Regional Planning Area.

Audubon commends the District for adopting a resource-based approach using submerged aquatic vegetation (SAV) species as an indicator of the salinity transition zone. The draft *Technical Documentation to Support Development of Minimum Flows and Levels for Florida Bay* provides an excellent summary of the scientific information evaluated in developing the MFL rule. This resource based approach backed by scientific analysis represents a sound model for future MFLs.

The technical support document identified widgeon grass (*Ruppia maritima*) as "important biological resource and an overall indicator of community health in this transition zone" (page iii). The report concluded, "A threshold condition averaging above 30 psu for 30 days during two consecutive years is identified as a condition that causes a long term (requiring at least two years for recovery) impact on *Ruppia* and the ecosystem" (page v). However, the draft proposed rule for Florida Bay in 40E-8.221c currently states "a minimum flow violation occurs when two exceedances, separated by at least a 180 day period, occur within a period of two consecutive years, more often than once in a six year period." Our primary concern with the proposed rule is the return frequency identified as "more often as once in a six year period." Under this rule it is conceivable that the population of *Ruppia,* requiring *at least two years* for recovery, could perpetually be under salinity stress or in a recovery period from salinity stress (i.e., never reaching a "healthy" or "recovered" state) without triggering a violation of the proposed rule. Clearly, the MFL rule should contain language to ensure that healthy stands of *Ruppia* occur for a significant percentage of the time.

We believe that a more conservative return frequency would better protect Florida Bay from significant harm. A review of the SFWMM modeling results for the 36-year simulation period for CERP1 (future

with CERP) indicates that significant harm occurred with a 1-in-18 year return frequency. The Natural System Model (NSM) scenario produced a 1-in-36 year return frequency. We understand that the MFL is not meant to restore the ecosystem but rather to protect it from significant harm, therefore the 1-in-36 year and 1-in-18 year return frequencies may not be valid for the MFL rule. However, the rule must also provide significant periods of time when there is a healthy *Ruppia* population. We would like to suggest a 1-in-10 year return frequency. Under this rule, the worst case scenario would be at least 2 of 10 years with a healthy *Ruppia* population (e.g. 2 years that exceed the 30 psu criterion followed by 2 years of recovery, followed by two more years that exceed the 30 psu criterion, again followed by 2 years of recovery and finally 2 consecutive years of healthy a *Ruppia* population).

We are supportive of the identification of prevention strategies in 40E-8.421, however, we disagree with (a), "under existing system conditions violations of the MFL are not anticipated to occur." Current and historical data collected by our Tavernier Science Center, under the direction of Jerome Lorenz, Ph.D., demonstrate that the existing system conditions currently cause significant harm to Florida Bay. We, therefore, recommend recovery strategies also be identified under Part IV Implementation of the proposed rule. We also concur with recommendations from the scientific peer review to continue monitoring *Ruppia* relative to its response to salinity levels and to ensure its appropriateness as an indicator species for the ecosystem.

Finally, although we believe the trophic relationships presented in defense of using SAV as the primary indicator species are valid, they need to be better documented. Ongoing research in the Taylor River area can be used to determine the value of *Ruppia* and other SAV to forage fishes and hence to higher trophic levels. These data may also be used to identify other forms of SAV that may be more critical to a healthy ecosystem thereby redefining the term "significant harm" for the Florida Bay landscape. Using the example of the peer review panel, *Utricularia spp.* is more sensitive to salinity than *Ruppia*. If Utricularia is found to be important to prey base fishes while *Ruppia* is found to be unrelated to fish abundance then the salt tolerance of *Utricularia* might be used to define significant harm and thereby changing the MFL rule.

Audubon of Florida is dedicated to supporting the District's efforts to protect Florida Bay from significant harm and, more importantly, to establish the reservation of water needed for Florida Bay's restoration. Thank you for this opportunity to share our concerns.

Sincerely,

Jerome J. Lorenz Ph.D.
Director of Research
Audubon of Florida

(Signature waived to expedite delivery)

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